

IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application.

1. (Withdrawn) An isolated polypeptide selected from the group consisting of:
 - a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1,
 - b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO:1,
 - c) a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, wherein said fragment binds to microtubules and
 - d) an immunogenic fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1.

2. (Withdrawn) An isolated polypeptide of claim 1 comprising the amino acid sequence of SEQ ID NO:1.

- 3.-9. (Canceled)

10. (Currently amended) An isolated antibody which specifically binds to a polypeptide ~~of claim 1:~~ selected from the group consisting of:
 - a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1,
 - b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO:1, said polypeptide binds to microtubules, and
 - c) a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, said fragment binds to microtubules.

11. (Withdrawn) An isolated polynucleotide selected from the group consisting of:
 - a) a polynucleotide comprising the polynucleotide sequence of SEQ ID NO:2,

- b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to the polynucleotide sequence of SEQ ID NO:2,
- c) a polynucleotide complementary to a polynucleotide of a),
- d) a polynucleotide complementary to a polynucleotide of b), and
- e) an RNA equivalent of a)-d).

12.-29. (Canceled)

30. (Original) The antibody of claim 10, wherein the antibody is:

- a) a chimeric antibody,
- b) a single chain antibody,
- c) a Fab fragment,
- d) a F(ab')₂ fragment, or
- e) a humanized antibody.

31.-42. (Canceled)

43. (Withdrawn) A method of detecting a polypeptide having the amino acid sequence of SEQ ID NO:1 in a sample, comprising the steps of:

- a) incubating the antibody of claim 10 with a sample under conditions to allow specific binding of the antibody and the polypeptide; and
- b) detecting specific binding, wherein specific binding indicates the presence of a polypeptide having the amino acid sequence of SEQ ID NO:1 in the sample.

44. (Withdrawn) A method of purifying a polypeptide having the amino acid sequence of SEQ ID NO:1 from a sample, the method comprising:

a) incubating the antibody of claim 10 with a sample under conditions to allow specific binding of the antibody and the polypeptide; and

b) separating the antibody from the sample and obtaining the purified polypeptide having the amino acid sequence of SEQ ID NO:1.

45. (Withdrawn) A method for a diagnostic test for a condition or disease associated with the expression of hLC3 in a biological sample comprising the steps of:

a) combining the biological sample with an antibody of claim 10, under conditions suitable for the antibody to bind the polypeptide and form an antibody:polypeptide complex; and

b) detecting the complex, wherein the presence of the complex correlates with the presence of the polypeptide in the biological sample.

46. (Previously presented) A composition comprising an antibody of claim 10 and an acceptable excipient.

47. (Withdrawn) A method of diagnosing a condition or disease associated with the expression of hLC3 in a subject, comprising administering to said subject an effective amount of the composition of claim 46.

48. (Previously presented) A composition of claim 46, further comprising a label.

49. (Withdrawn) A method of diagnosing a condition or disease associated with the expression of hLC3 in a subject, comprising administering to said subject an effective amount of the composition of claim 48.

50. (Withdrawn) A method of preparing a polyclonal antibody with the specificity of the antibody of claim 10 comprising:

- a) immunizing an animal with a polypeptide having the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response;
- b) isolating antibodies from said animal; and
- c) screening the isolated antibodies with the polypeptide, thereby identifying a polyclonal antibody which binds specifically to a polypeptide having the amino acid sequence of SEQ ID NO:1.

51. (Previously presented) An antibody produced by a method of claim 50.

52. (Previously presented) A composition comprising the antibody of claim 51 and a suitable carrier.

53. (Withdrawn) A method of making a monoclonal antibody with the specificity of the antibody of claim 10 comprising:

- a) immunizing an animal with a polypeptide having the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response;
- b) isolating antibody producing cells from the animal;
- c) fusing the antibody producing cells with immortalized cells to form monoclonal antibody-producing hybridoma cells;
- d) culturing the hybridoma cells; and
- e) isolating from the culture monoclonal antibody which binds specifically to a polypeptide having the amino acid sequence of SEQ ID NO:1.

54. (Previously presented) A monoclonal antibody produced by a method of claim 53.

55. (Previously presented) A composition comprising the antibody of claim 54 and a suitable carrier.

56. (Previously presented) The antibody of claim 10, wherein the antibody is produced by screening a Fab expression library.

57. (Previously presented) The antibody of claim 10, wherein the antibody is produced by screening a recombinant immunoglobulin library.